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EXAMINER	
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/897,151	CHASKAR, HEMANT M.	
	Examiner	Art Unit	
	Ian N Moore	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 March 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 October 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3-12-2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because in **FIG. 5,6, and 7 the description labels inside the shaded boxes (e.g. steps 5,11,13, and 14 of FIG. 5) are not clearly visible**. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1, 4, 5, 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Fodor (U.S. 2001/0027490).

Regarding Claim 1, Fodor discloses a method (see FIG. 23 and 24; or FIG. 26 and 27) for efficient QOS signaling for Mobile IP protocol using RSVP framework (see FIG. 19 and 22, Mobile IP with RSVP) in which mobile nodes (see FIG. 19 and 22, a combined mobile system of TE and MT) are connected to correspondent nodes (see FIG. 19 and 22, Internet Routers in the external network) via a plurality intermediate nodes, (see FIG. 19 and 22, core network nodes (SGSN/GGSN)) comprising the steps of:

initiating in the mobile node (see FIG. 23 or 26, a combined system of TE and MT) a first PATH message for upstream data (see FIG. 23 or 26, generating PATH message at the combined mobile system for external network); see page 8, paragraph 157-158; see page 9, paragraph 165-167;

sending the first PATH message from the mobile node to the correspondent node (see FIG. 23 or 26; Internet Router in external network) via intermediate nodes (see FIG. 23 or 26; the combined mobile system sends PATH message via SGSN and GGSN nodes to Internet Router); see page 8, paragraph 157-158; see page 9, paragraph 165-167;

initiating in the correspondent node a first RESV message for upstream data (see FIG. 23 or 26; Internet Router generates RESV message for external network);

sending this RESV message from the correspondent node to the mobile node via the intermediate nodes (see FIG. 23 or 26; Internet Router sends RESV message to the combined mobile system via GGSN and SGSN); see page 8, paragraph 157-158; see page 9, paragraph 165-167;

thereafter sending REFRESH (periodic PATH and RESV) messages only between intermediates nodes (see FIG. 23 or 26; PDP context messages sends between SGSN and GGSN); see page 8, paragraph 157-158; see page 9, paragraph 165-167;

initiating in the correspondent node a first PATH message for downstream data (see FIG. 24 or 27; generating PATH message at Internet Router for the combined mobile system); see page 8-9, paragraph 159-169;

sending the first PATH message from the correspondent node to the mobile node via intermediate nodes (see FIG. 24 or 27; the Internet Router sends PATH message via SGSN and GGSN nodes to combined mobile system); see page 8-9, paragraph 159-169;

initiating in the mobile node a first RESV message for downstream data (see FIG. 24 or 27, generating RESV message at the combined mobile system); see page 8-9, paragraph 159-169;

sending the first RESV message from the mobile node to the correspondent node via the intermediate nodes (see FIG. 24 or 27; combined mobile system sends

RESV message to the Internet Router via SGSN and GGSN nodes); see page 8-9, paragraph 159-169; and

thereafter sending REFRESH (periodic PATH and RESV) messages only between intermediate nodes (see FIG. 24 or 27; PDP context messages sends between SGSN and GGSN); see page 8-9, paragraph 159-163,168-169.

Regarding Claim 4, Fodor discloses wherein the mobile node is attached to a first node of the intermediate nodes (see FIG. 23 or 26; SGSN) by a wireless link (see FIG. 23 or 26, UTRAN), and wherein initial PATH messages and initial RESV messages traverse the wireless link (see FIG. 23 or 26); see page 8, paragraph 157-158; see page 9, paragraph 165-167.

Regarding Claim 5, Fodor discloses wherein the correspondent node is attached to a second node of the intermediate nodes (see FIG. 23 or 26; GGSN) by a further wireless link (see FIG. 23 or 26, UTRAN), and wherein initial PATH messages and initial RESV messages traverse the further wireless link (see FIG. 23 or 26); see page 8, paragraph 157-158; see page 9, paragraph 165-167.

Regarding Claim 11, Fodor discloses performing proactive RSVP signaling for upstream data at the time of handover of mobile node from one access router to another (see page 7, paragraph 131-137; UMTS performs handover by utilizing RSVP signaling).

Regarding Claim 12, Fodor discloses performing proactive RSVP signaling for downstream data at the time of handover of mobile node from one access router

to another (see page 7, paragraph 131-137; UMTS performs handover by utilizing RSVP signaling).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2,3, 6-10, 29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fodor in view of Li (U.S. 6,728,365).

Regarding Claim 6, Fodor discloses a method (see FIG. 23 and 24; or FIG. 26 and 27) for efficient QOS signaling for Mobile IP protocol using RSVP framework (see FIG. 19 and 22, Mobile IP with RSVP) in which mobile nodes (see FIG. 19 and 22, a combined mobile system of TE and MT) are connected to correspondent nodes (see FIG. 19 and 22, Internet Routers in the external network) via a plurality intermediate nodes, (see FIG. 19 and 22, core network nodes (SGSN/GGSN)) comprising the steps of:

initiating in the mobile node (see FIG. 23 or 26, a combined system of TE and MT) a first PATH message for upstream data (see FIG. 23 or 26, generating PATH message at the combined mobile system for external network); see page 8, paragraph 157-158; see page 9, paragraph 165-167;

sending the first PATH message from the mobile node to the correspondent node (see FIG. 23 or 26; Internet Router in external network) via intermediate nodes (see FIG. 23 or 26; the combined mobile system sends PATH message via SGSN and GGSN nodes to Internet Router); see page 8, paragraph 157-158; see page 9, paragraph 165-167;

initiating in the correspondent node a first RESV message for upstream data (see FIG. 23 or 26; Internet Router generates RESV message for external network);

sending this RESV message from the correspondent node to the mobile node via the intermediate nodes (see FIG. 23 or 26; Internet Router sends RESV message to the combined mobile system via GGSN and SGSN); see page 8, paragraph 157-158; see page 9, paragraph 165-167;

forming a proxy FRESH generation function for upstream data (see FIG. 23 or 26; PDP context message) in a node that is close to the mobile node in the end-to-end packet path (see FIG. 23 or 26; SGSN node) and a proxy REFRESH interception function for upstream data (see FIG. 23 or 26; PDP context message) in a node that is close to the correspondent node in the end-to-end packet path (see FIG. 23 or 26; GGSN node; see page 8, paragraph 157-158; see page 9, paragraph 165-167;

initiating in the correspondent node a first PATH message for downstream data (see FIG. 24 or 27; generating PATH message at Internet Router for the combined mobile system); see page 8-9, paragraph 159-163,168-169;

sending the first PATH message from the correspondent node to the mobile node via intermediate nodes (see FIG. 24 or 27; the Internet Router sends PATH message via SGSN and GGSN nodes to combined mobile system); see page 8-9, paragraph 159-163,168-169.

initiating in the mobile node a first RESV message for downstream data (see FIG. 24 or 27, generating RESV message at the combined mobile system); see page 8-9, paragraph 159-163,168-169;

sending the first RESV message from the mobile node to the correspondent node via the intermediate nodes (see FIG. 24 or 27; combined mobile system sends RESV message to the Internet Router via SGSN and GGSN nodes); see page 8-9, paragraph 159-169; and

forming a proxy REFRESH generation function for downstream data (see FIG. 24 or 27; PDP context message) in a node that is close to the correspondent node in the end-to-end packet path (see FIG. 24 or 27, GGSN node) and a proxy REFRESH interception function for downstream data (see FIG. 24 or 27; PDP context message) in a node that is close to the mobile node in the end-to-end packet path, (see FIG. 24 or 27; SGSN node; (see page 8-9, paragraph 159-169).

Fodor does not explicitly disclose the messages do not traverse the wireless links. However, Li teaches the message do not traverse the wireless links (see FIG. 11 B-C; intercept the original message received at the BS so that the original message do not traverse the wireless links in order to provide QoS signaling; see col. 18, lines 4-40). Therefore, it would have been obvious to one having ordinary

skill in the art at the time the invention was made to provide interception mechanism at the base station, as taught by Li in the system of Fodor, so that it would provide an effective mechanism for QoS signaling over the air; see Li col. 1, line 50-63; see col. 2, lines 1 to col. 3, lines 14).

Regarding Claim 2, Fodor discloses wherein REFRESH messages are exchanged between the intermediate nodes (see FIG. 23 or 26; PDP context messages sends between GGSN and SGSN) wherein the mobile node is attached to a first node of the intermediate nodes (see FIG. 23 or 26, SGSN) by a wireless link (see FIG. 23 or 26, UTRAN); see page 8, paragraph 157-158; see page 9, paragraph 165-167.

Fodor does not explicitly disclose the messages do not traverse the wireless links. However, Li teaches the message do not traverse the wireless links (see FIG. 11 B-C; intercept the original message received at the BS so that the original message do not traverse the wireless links in order to provide QoS signaling; see col. 18, lines 4-40). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide interception mechanism at the base station, as taught by Li in the system of Fodor, so that it would provide an effective mechanism for QoS signaling over the air; see Li col. 1, line 50-63; see col. 2, lines 1 to col. 3, lines 14).

Regarding Claim 3, Fodor discloses wherein the mobile node is attached to a first node of the intermediate nodes (see FIG. 23 or 26, GGSN) by a wireless link (see FIG. 23 or 26, UTRAN) and REFRESH messages are exchanged between the

intermediate nodes (see FIG. 23 or 26; PDP context messages sends between GGSN and SGSN); see page 8, paragraph 157-158; see page 9, paragraph 165-167.

Fodor does not explicitly disclose the messages do not traverse the wireless links. However, Li teaches the message do not traverse the wireless links (see FIG. 11 B-C; intercept the original message received at the BS so that the original message do not traverse the wireless links; see col. 18, lines 4-40). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide interception mechanism at the base station, as taught by Li in the system of Fodor, so that it would provide an effective mechanism for QoS signaling over the air; see Li col. 1, line 50-63; see col. 2, lines 1 to col. 3, lines 14).

Regarding Claim 7, Fodor discloses wherein a proxy REFRESH generation function for upstream data generates PATH REFRESH messages (see FIG. 23 and 26, PATH, RESV, and/or Context messages) on behalf of the mobile node (see FIG. 23 or 26; SGSN node; see page 8, paragraph 157-158; see page 9, paragraph 165-167).

Regarding Claim 8, Fodor discloses wherein a proxy REFRESH interception function for upstream data responds to the PATH REFRESH message by sending RESV REFRESH message (see FIG. 23 and 26, PATH, RESV, and/or Context messages) on behalf of the correspondent node, if the latter is attached using the further wireless link (see FIG. 23 or 26, GGSN); see page 8, paragraph 157-158;

see page 9, paragraph 165-167. Li teaches the message do not traverse the wireless links as recited above in claim 6.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide interception mechanism, as taught by Li, in the system of Fodor, for the same motivation as stated above in claim 6.

Regarding Claim 9, Fodor discloses wherein a proxy REFRESH generation function for downstream data generates PATH REFRESH messages (see FIG. 24 and 27, PATH, RESV, and/or Context messages) on behalf of the correspondent node; see page 8-9, paragraph 159-169).

Regarding Claim 10, Fodor discloses wherein a proxy REFRESH interception function for downstream data responds to the PATH REFRESH message by sending RESV REFRESH message (see FIG. 24 and 27, PATH, RESV, and/or Context messages) on behalf of the mobile node, if the latter is attached using the further wireless link (see FIG. 24 or 27, SGSN); see page 8-9, paragraph 159-169. Li teaches the message do not traverse the wireless links as recited above in claim 6.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide interception mechanism, as taught by Li, in the system of Fodor, for the same motivation as stated above in claim 6.

Regarding Claim 29, Fodor discloses using a flow ID number in RSVP messaging to identify packet flow (see FIG. 10-13; see page 3, paragraph 47; see page 4, paragraph 52-65; traffic flow identifiers).

Regarding Claim 32, Fodor discloses mapping multiple RSVP FILTER SPECS to a resource that is identified by the flow ID number (see page 4, paragraph 65-67; see page 7, paragraph 142; see page 12, paragraph 201,207-210).

6. Claim 13,14,16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fodor in view of Khalil (U.S. 6,578,085).

Regarding Claim 13, Fodor discloses transferring PATH state block and RESV state block for uplink data (see FIG. 23 or 26; sending PATH and RESV message; see page 8, paragraph 157-158; see page 9, paragraph 165-167);

sending from the new access router (see FIG. 23 or 26; SGSN/GGSN) the PATH message for the upstream data along the new packet path (see FIG. 23 or 26; GSSN/GGSN sends PATH message); see page 8, paragraph 157-158; see page 9, paragraph 165-167; and

sending from the correspondent node the RESV message for the upstream data along the new packet path and intercepting this RESV message at the new access router (see FIG. 23 or 26; Internet Router sends RESV message, which are intercepted by GGSN/SGSN); see page 8, paragraph 157-158; see page 9, paragraph 165-167;

Fodor does not explicitly disclose transferring state block for uplink data from an old access router to a new access router. However, Khalil discloses transferring state blocks for uplink data from an old access router (see FIG. 1, 2 or 7, Home

Agent 16) to a new access router (see FIG. 1, 2 or 7, Foreign Agent 18; see col. 3, lines 50-62; see col. 5, lines 9-32);

sending from the new access router the message for the upstream data along the new packet path (see col. 3, lines 50-62; see col. 5, lines 9-32); and

sending from the correspondent node (see FIG. 2 or 7, Correspondent Node, CN 24) the message for the upstream data along the new packet path and intercepting this message at the new access router (see col. 3, lines 65 to col. 4, lines 20; see col. 5, lines 9-32).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the transferring of message between old and new agent, as taught by Khalil, in the system of Fodor, so that it would provide route optimization in the wireless Internet Protocol network; see Khalil col. 2, line 14-53.

Regarding Claim 14, Khalil discloses informing the access router to which correspondent node is attached not to reserve any new link resources for the sent RESV message for upstream data (see col. 4, lines 1-20; see col. 5, lines 9-32; the home agent uses COA or tunneling or binding so that no new link resources reserving are required).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide COA or tunneling, as taught by Khalil, in the system of Fodor, for the same motivation as stated above in claim 13.

Regarding Claim 16, the combined system of Fodor and Khalil discloses PATH state block/message and RESV state block/message as disclosed above in claim 1. Khalil discloses wherein the messages/blocks are modified before transferring to reflect a new care-of address of the mobile node (see col. 4, lines 1-20; see col. 5, lines 9-32; care-of-address COA or tunneling of the mobile node 12).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide COA or tunneling, as taught by Khalil, in the system of Fodor, for the same motivation as stated above in claim 13.

Regarding Claim 17, the combined system of Fodor and Khalil discloses fast handover protocol (see page 7, paragraph 131-137; UMTS performs handover) and context transfer protocol (see page 2-3, paragraph 27,30-31; packet data context protocol) are used to transfer PATH state block/message and RESV state block/message between access routers as disclosed above in claim 1. Khalil discloses transferring state blocks for uplink data from an old access router (see FIG. 1, 2 or 7, Home Agent 16) to a new access router (see FIG. 1, 2 or 7, Foreign Agent 18; see col. 3, lines 50-62; see col. 5, lines 9-32).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the transferring of message between old and new agent, as taught by Khalil, in the system of Fodor, for the same motivation as stated above in claim 13.

Regarding Claim 18, Fodor discloses inferring at the correspondent node upon receiving the PATH message for upstream data from the new access router

(see FIG. 23 or 26; SGSN/GGSN), about the impending handover of the mobile node using higher layer information (see FIG. 24 or 27; deducing at the Internet Router upon receiving PATH message about the new session of the mobile node; see page 8-9, paragraph 159-163,168-169);

sending the PATH message from the correspondent node for downstream data along the new packet path and intercepting this PATH message at the new access router (see FIG. 24 or 27; Internet Router sends PATH message, which are intercepted by GGSN/SGSN; see page 8-9, paragraph 159-163,168-169; and

sending RESV from the new access router (see FIG. 23 or 26; SGSN/GGSN) to the correspondent node for the downstream data along the new packet path (see FIG. 24 or 27, GSSN/GGSN sends PATH message; see page 8-9, paragraph 159-163,168-169.

Fodor does not explicitly disclose mobile node is being handed off to the new access router. However, Khalil disclose inferring at the correspondent node (see FIG. 2 or 7, Correspondent Node, CN 24) upon receiving the message for upstream data from the new access router (see FIG. 1, 2 or 7, Foreign Agent 18) where mobile node is being handed off, about the impending handover of the mobile node using higher layer information (see col. 3, lines 50 to col. 4, lines 30; see col. 5, lines 9-32);

sending the message from the correspondent node for downstream data along the new packet path and intercepting this message at the new access router (see col. 3, lines 50-62; see col. 5, lines 9-32); and

sending mesage from the new access router to the correspondent node for the downstream data along the new packet path (see col. 3, lines 50 to col. 4, lines 30; see col. 5, lines 9-32).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the step of mobile station being handoff to the new access router, as taught by Khalil, in the system of Fodor, so that it would provide route optimization in the wireless Internet Protocol network; see Khalil col. 2, line 14-53.

Regarding Claim 19, the combined system of Fodor and Khalil discloses wherein the correspondent node upon receiving the PATH message for upstream data from the new access router, infers about the impending handover of the mobile node as described above in claim 18. Khalil further discloses using the binding of transport layer (UDP or TCP) port with the application (see col. 3, lines 50 to col. 4, lines 30; see col. 5, lines 9-32).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the binding of transport layer, as taught by Khalil, in the system of Fodor, for the same motivation as described above claim 18.

Regarding Claim 20, the combined system of Fodor and Khalil discloses sending PATH REFRESH messages (see FIG. 23 and 26, PATH, RESV, and/or Context messages) for the upstream data from the access router along the new packet path on behalf of the mobile node as described above in claims 1 and 13. Khalil further discloses sending subsequent messages for the upstream data from

the new access router along the new packet path on behalf of the mobile node (see col. 3, lines 50-62; see col. 5, lines 9-32).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the mechanism of message from the foreign agent on the new path on behalf of the mobile node, as taught by Khalil, in the system of Fodor, for the same motivation as stated above in claim 13.

Regarding Claim 21, Fodor discloses intercepting at the access router (see FIG. 23 or 26; GGSN) to which correspondent node is attached, the PATH REFRESH messages (see FIG. 23 and 26, PATH, RESV, and/or Context messages) for the upstream data arriving along the new packet path (see page 8, paragraph 157-158; see page 9, paragraph 165-167);

initiating at the access router to which correspondent node is attached, the RESV REFRESH messages for the upstream data (see FIG. 23 and 26, PATH, RESV, and/or Context messages; see page 8, paragraph 157-158; see page 9, paragraph 165-167; and

sending the RESV REFRESH messages along the new upstream packet path (see FIG. 23 or 26, GGSN sends the messages to external network; see page 8, paragraph 157-158; see page 9, paragraph 165-167).

Khalil discloses sending subsequent messages for the upstream data from the new access router along the new packet path (see col. 3, lines 50-62; see col. 5, lines 9-32). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the mechanism of sending

message from the foreign agent on the new path, as taught by Khalil, in the system of Fodor, for the same motivation as stated above in claim 13.

Regarding Claim 22, Fodor discloses intercepting RESV REFRESH messages (see FIG. 23 and 26, PATH, RESV, and/or Context messages) for the upstream data at the new access router to which the mobile node is attached as described above in claim 1 and 13. Khalil discloses intercepting subsequent REFRESH messages for the upstream data at the new access router so that they do not traverse the wireless link to which the mobile node is attached (see col. 3, lines 50 to col. 4, lines 30; see col. 5, lines 9-32). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to send subsequent messages for the upstream data from the new access router along the new packet path on behalf of the mobile node not traverse the air link, as taught by Khalil, in the system of Fodor, for the same motivation as stated above in claim 13.

Regarding Claim 23, Fodor discloses sending PATH REFRESH messages (see FIG. 24 or 27; PATH, RESV, and/or Context messages; see page 8-9, paragraph 159-169) for the downstream data from the access router to which correspondent node is attached along the new packet path on behalf of the correspondent node as described above in claims 1 and 18. Khalil further discloses sending subsequent messages for the upstream data from the new access router along the new packet path on behalf of the correspondent node (see col. 3, lines 50 to col. 4, lines 30; see col. 5, lines 9-32).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the mechanism of message from the foreign agent on the new path on behalf of the CN, as taught by Khalil, in the system of Fodor, for the same motivation as stated above in claim 18.

Regarding Claim 24, Fodor discloses intercepting RESV REFRESH messages for the downstream data at the access router (see FIG. 24 or 27; GGSN) to which correspondent node is attached so that they do not traverse the wireless link (see FIG. 23 or 26, UTRAN) to which the correspondent node is attached (see page 8-9, paragraph 159-169). Khalil also discloses intercepting messages for the downstream data at the access router (to which correspondent node is attached so that they do not traverse the wireless link to which the correspondent node is attached (see col. 3, lines 50 to col. 4, lines 30; see col. 5, lines 9-32).

7. Claim 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fodor and Khalil, as applied to claim 13 above, and further in view of Lomp (U.S. 5,345,467).

Regarding Claim 25, the combined system of Fodor and Khalil discloses all limitations as set forth above in claim 1 and 13. Neither Fodor nor Khalil explicitly disclose comparing at the new access router router, the message with the transferred block/message from the old access router. However, Lomp discloses comparing at the new access router (see FIG. 1, Base Station 2; see FIG. 8C, step 534 and 538), the RESV/request message for upstream data with the transferred

RESV state block from the old access router (see FIG. 8C; base station 1 and steps 530,532,534,538,540,544; note that base station 2 compares/evaluates the request/handoff parameters; see col. 21, lines 40 to col. 22, lines 45); and

informing the result to the mobile node (see FIG. 8C, step 548,552; see col. 22, lines 32-45).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide comparing the request parameter at the target base station, as taught by Lomp in the combined system of Fodor and Khalil, so that it would improve the base site and controller thereby hand-off is achieved without loss of data; see Lomp col. 2, line 55-67.

Regarding Claim 26, the combined system of Fodor, Khalil and Lomp discloses all limitations as set forth above in claim 1, 13 and 25. Lomp further discloses deciding whether to continue the packet session in case the required resource is not available along the new packet path (see FIG. 8C, step 534 with Negative, and step 538 with No; see col. 21, lines 40 to col. 22, lines 45).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to determine required resource is not available, as taught by Lomp in the combined system of Fodor and Khalil, for the same motivation as described above in claim 25.

Regarding Claim 27, the combined system of Fodor, Khalil and Lomp discloses all limitations as set forth above in claim 1, 13 and 25. Lomp further discloses tearing down the packet session if the resource availability along the new

packet path is not acceptable (see FIG. 8C, step 536; terminating the transmission; see col. 21, lines 40 to col. 22, lines 45).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to terminate the transmission when there is negative available resource, as taught by Lomp in the combined system of Fodor and Khalil, for the same motivation as described above in claim 25.

Regarding Claim 28, the combined system of Fodor, Khalil and Lomp discloses all limitations as set forth above in claim 1, 13 and 25. Khalil further discloses adapting the mobile node's application to the resource availability along the new packet path (see col. 3, lines 50-62; see col. 5, lines 9-32). Lomp also discloses adapting to the resource availability along the new packet path (see FIG. 8C, step 548,552,550; see col. 21, lines 40 to col. 22, lines 45).

8. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fodor in view of Li as applied to claim 6 above, and further in view of Leung (U.S. 6,760,444).

Regarding Claim 30, Fodor discloses wherein the flow ID number as described above in claim 29. Neither Fodor nor Li explicitly disclose hashing a known block of data with user specific key. However, hashing a known block of data with user specific key is well known in the art. In particular, Leung discloses the mobile registration request for the flow is calculated by hashing a known block of

data with user specific key (see FIG. 3, see col. 2, lines 57 to col. 3, lines 65; see col. 7, lines 50 to col. 8, lines 4).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to hash a known block of data with user specific key, as taught by Leung, in the combined system of Fodor and Li, so that it would provide configuration, modification, and retrieval of security associations which would reduce the administrative support to configure and modify the security association; see Leung col. 5, line 1-36; and it will increase the security for the air transmission.

Regarding Claim 31, it is well know in the art that the user specific key is chosen by user, and is at least one of a password or a pet word. In particular, Leung discloses wherein the user specific key is chosen by a user (see col. 2, lines 57 to col. 3, lines 65; a mobile user or administrator), and is at least one of a password or a pet word (see col. 2, lines 57 to col. 3, lines 65; see col. 7, lines 50 to col. 8, lines 4).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use password chosen by the user, as taught by Leung and well established teaching in art, in the combined system of Fodor and Li, so that it would provide configuration, modification, and retrieval of security associations which would reduce the administrative support to configure and modify the security association; see Leung col. 5, line 1-36; and it will increase the security for the air transmission.

Allowable Subject Matter

9. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 571-272-3085. The examiner can normally be reached on M-F: 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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4/6/05

BOB PHUNKULH
PRIMARY EXAMINER 4/25/05